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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/774,781

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Kim Gene Friesen

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05/04/2006

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EXAMINER

GEMBEH, SHIRLEY V

ART UNIT

PAPER NUMBER

1614

DATE MAILED: 05/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/774,781

Applicant(s)

FRIESEN ET AL.

Examiner

Shirley V. Gembeh

Art Unit

1614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8/10/05; 5/23/05
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement (IDS) submitted on December 13, 2004, May 23, 2005 and Aug 10 2005 has been considered.

The International Search Report for PCT/US2005/00424 and written opinion PCT/US2005/00424 are not considered as neither are a publication

Status of claims

Claims 1-17 are pending.

Claims 1-17 are rejected.

Claim Rejections - 35 USC § 112-second paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3, 6, 10, 15-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim 1 is indefinite as to what are or are not the cartilage abnormalities. Is it the cartilage formation that is abnormal or is it the components in the cartilage that are abnormal? How does administering the claimed combination of a sulfur containing amino acid compound and manganese treat the abnormalities or the cartilage, the claim is unclear as to the measure of "decreasing cartilage abnormality".

Claims 1, 3, 6, 10, 15-17 the term "atleast" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one

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skilled in the art would not be reasonably apprised of the scope of the invention. For example at least acknowledges that there are others.

Claim 2 is indefinite since the animal is prevented from having the disease but yet the claim requires selecting the disease to be treated.

Claims 4 and 9 recite about 1.2 weight percent compared to what? With what is this ratio compared to?

Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim is indefinite as to what are or are not the cartilage abnormalities. Is it the cartilage formation that is abnormal or is it the components in the cartilage that are abnormal? Does administering the claimed combination a sulfur containing amino acid compound and manganese treat the abnormalities or the cartilage?

The following is a quotation of the first paragraph of 35 U.S.C. 112: first paragraph

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-17 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for treating the diseases recited in claim 2 and the compounds of claim 3 as active agents does not reasonably provide enablement for preventing cartilage abnormalities (see claim 2) decreasing cartilage abnormalities

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(claim 1) in animals, decreasing cartilage abnormalities with all compounds containing sulfur amino acid and manganese. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims.

For rejections under 35 U.S.C. 112, first paragraph, the following factors must be considered (In re Wands, 8 USPQ2d 1400, 1404 (CAFC, 1988)):

- 1) Nature of invention.
- 2) State of prior art.
- 3) Quantity of experimentation needed to make or use the invention based on the content of the disclosure
- 4) Level of predictability in the art.
- 5) Amount of direction and guidance provided by the inventor.
- 6) Existence of working examples.
- 7) Breadth of claims.
- 8) Level of ordinary skill in the art.

See below:

In the instant case, applicants are claiming in part, a method of decreasing cartilage abnormalities by systematically administering a pharmaceutical formulation containing a therapeutically effective amount of at least one sulfur containing amino acid compound and manganese (claim 1) useful for the treatment and/or amelioration of osteoporosis, rheumatoid arthritis, osteochondrosis, degenerative joint disorder etc (claim 2).

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1) Nature of the invention.

The nature of the invention is directed to methods of treating in an animal to alleviate the pathological effects of decreasing cartilage abnormalities, comprising administering the instant compound to a patient (an animal) in need thereof. As stated, however, claim 1 includes within its scope, any sulfur containing amino acid compound and manganese, however applicant fails to address what type of cartilage abnormalities is been prevented or at least treated. Cartilage is a type of dense connective tissue. Cartilage is composed of cells called chondrocytes which are dispersed in a firm gel-like ground substance, called the matrix. Cartilage is avascular (contains no blood vessels) and nutrients are diffused through the matrix. Cartilage is found in the joints, the rib cage, the ear, the nose, in the throat and between intervertebral disks. There are three main types of cartilage: hyaline, elastic and fibrocartilage (see wikipedia.com).

A. Prevention by decreasing cartilage abnormalities, comprising administering the instant compound

There is no one particular decreasing cartilage abnormalities is effective for all forms of cartilage abnormalities. There is no one treatment, or combination of treatments, which provides prevention (not occurring even the first time) of fractures due to osteoporosis for example. Notwithstanding The best prevention, however, is a life-long commitment to physical activity, good nutrition, and normal reproductive hormone

status. (See www.deaconess.com), however, this is not prevention, all of which helps reduce osteoarthritis but do not prevent.

As discussed below, (see [http:// \(see www.deaconess.com\)](http://www.deaconess.com)), teaches that researchers face the problem of sifting through potential conditional drugs containing sulfur and manganese to find ones promising enough to make. Treatment of osteoarthritis is classified in two groups (using drugs and alternative medicine-acupuncture) and none of the drugs have proven themselves yet (see www.deaconess.com)). While the state of the art is relatively high with regard to the treatment of osteoarthritis with specific agents, for a compound or genus to be effective against condition associated with calcium or magnesium generally is contrary to medical science. Thus a considerable amount of invivo and invitro testing is required before the agent can be considered for a particular type of disease. As disclosed (see www.deaconess.com) teaches "no treatment can cure osteoarthritis, and none can alter its progression with certainty (see underlined section page 11).

B. Abnormalities

(see www.WebMD.com teaches that there is no one treatment, or combination of treatments, which provides prevention (not occurring even the first time) of degenerative joint disease for example that can occur even from day one of the patient (birth). WebMD.com teaches that prevention of arthritis may not be possible and medications do not reverse or slow the progression of joint damage caused by arthritis.

It is noted that the pharmaceutical art is unpredictable, requiring each embodiment to be individually assessed for physiological activity. *In re Fisher*, 427 F.2d

833, 166 USPQ 18 (CCPA 1970) indicates that the more unpredictable an area is, the more specific enablement is necessary in order to satisfy the statute. Further, their mode of action is often unknown or very unpredictable and administration of the drugs can be accompanied by undesirable side effects.

C. Composition

(see www.WebMD.com teaches that there is no one treatment, or combination of treatments, which provides prevention (not occurring even the first time) of degenerative joint disease for example that can occur even from day one of the patient (birth).

WebMD.com teaches that prevention of arthritis may not be possible and medications do not reverse or slow the progression of joint damage caused by arthritis.

2) State of the prior art and the predictability or lack thereof in the art.

The state of the prior art is that it involves a myriad of diseases such as osteoarthritis, rheumatoid arthritis, osteochondrosis, degenerative joint disease, synovitis etc thus preventing or treating will include screening *in vitro* and *in vivo* to determine the effect of the compound on the specific disease. There is no absolute predictability even in view of the seemingly high level of skill in the art. The existence of these obstacles establishes that the contemporary knowledge in the art would prevent one of ordinary skill in the art from accepting any therapeutic regimen on its face. The instant claimed invention is highly unpredictable as discussed below:

Thus, in the absence of a showing of correlation between treating all cartilage abnormalities with a sulfur containing amino acid and manganese claimed as capable of being treated by compounds of the instant claims, one of ordinary skill in the art is

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unable to fully predict possible results from the administration of the compounds due to the unpredictability of the role of bone fracture for example.

3) Quantity of experimentation needed to make or use the invention based on the content of the disclosure.

The quantity of experimentation needed is undue experimentation. One of ordinary skill in the art would first need to determine the type of conditions associated with calcium or magnesium, and then determine which of the thousands of compounds would be suitable for said treatment and/or prevention. Note that osteoarthritis is only one such condition. There are others, e.g., rheumatoid arthritis, osteochondrosis, degenerative joint disease for which the current specification provides no guidance.

4) Level of predictability in the art.

The art pertaining to the treatment of all calcium and magnesium conditions remain highly unpredictable. As disclosed above, there is no absolute predictability even in view of the seemingly high level of skill in the art. Firstly, for a compound or genus to be effective against osteoarthritis for example with decreasing cartilage abnormalities is generally contrary to medical science. Conditions associated with decreasing cartilage abnormalities is a process that can take place in virtually any part of the body. There is a vast range of forms that it can take, causes for the problem, and biochemical pathways that mediate the conditions associated with decreasing cartilage abnormalities. Accordingly, treatments for conditions associated with calcium are normally tailored to the particular type of mediator present, as there is no, and there can be no "magic bullet" against all conditions associated with decreasing cartilage abnormalities generally.

5) Amount of direction and guidance provided by the inventor.

The amount of direction or guidance present is nowhere found in the specification. However, the gap between the teaching in the specification of *in vitro* activity and *in vivo* is large enough to warrant thorough and compelling *in vivo* data especially in the absence of working examples demonstrating the full scope of all decreasing cartilage abnormalities related diseases and conditions.

6) Existence of working examples.

As discussed above, no working example is found. Applicant's omission of working examples does not enable one of ordinary skill in the art to treat the numerous amounts of diseases encompassed by the instant invention.

7) Breadth of claims.

Claim 1 is extremely broad due to the vast number of possible diseases encompassed by the instant invention. Condition associated with decreasing cartilage abnormalities involves a myriad of diseases such as rheumatoid arthritis, osteochondrosis, etc.

8) Level of ordinary skill in the art.

Due to the unpredictability in the pharmaceutical art (see reference see www.deaconess.com), it is noted that each embodiment of the invention is required to be individually assessed for physiological activity by *in vitro* and *in vivo* screening to determine which compounds exhibit the desired pharmacological activity and which diseases would benefit from this activity.

Hence, the specification fails to provide sufficient support of the broad use of the compounds of the claims for the treatment of any disease. As a result necessitating one of ordinary skill in the art to perform an exhaustive search to determine which

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diseases can be treated by what compounds of the instant claims in order to practice the claimed invention.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 10-11 and 15-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Florio US 5,840,715.

I. Florio discloses S-adenosyl-methionine (a sulfur-containing amino acid) (see col. 3 lines and manganese (see abstract) to treat osteoarthritis and provides relief from arthritis as in claims 1-2, 10-11 and 15-16. Treating, enhancing and preventing as recited in the above claims are anticipated because the end result is to relieve the patient thereof of the symptoms. In an animal is anticipated, as animals are the only ones capable of suffering from joint pains/arthritis.

II. Claims 1-2, 10-11 and 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by www.dhea.com/jointrec.htm (1998)

www.dhea.com/jointrec.htm discloses as in current claims 1-2, 10-11 and 15-16, a composition for the treatment of arthritis, dl-methionine and manganese. Treating, enhancing and preventing as recited in the above claims are anticipated because the end result is to relieve the patient thereof of the symptoms. In an animal is anticipated,

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as animals are the only ones capable of suffering from joint pains/arthritis. Oral administration is anticipated as the composition is in a form of a tablet.

III. Claims 1-2, 10-11 and 15-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Henderson et al US 6,255,293.

Henderson et al teach administering a composition for reducing inflammation of connective tissue in mammals by administering orally (see col. 20 lines 50+) S-adenosylmethionine an amino sugar that contains manganese (see col. 10 lines 45-65+) as in claims 1-2, 10-11 and 15-16. Treating, enhancing and preventing as recited in the above claims are anticipated because the end result is to relieve the patient thereof of the symptoms.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 1-5 and 10-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Florio US 5,840,715 taken with Henderson et al US 6,255,293 and www.dhea.com/jointrec.htm in view of Myers US 6,911,215 B2.

Florio discloses S-adenosyl-methionine (a sulfur-containing amino acid) (see col. 3 lines and manganese (see abstract) to treat osteoarthritis and provides relief from arthritis as in claims 1-3, 10-11 and 15-16. Treating, enhancing and preventing as recited in the above claims are obvious because the end result is to relieve the patient thereof of the symptoms. In an animal is obvious as animals are the only ones capable of suffering from joint pains/arthritis

Henderson et al teach current claims 1-3, 10-11 and 14-16 administering a composition for reducing inflammation of connective tissue (cartilage) in mammals by administering orally (see col. 20 lines 50+) S-adenosylmethionine an amino sugar that contains manganese (see col. 10 lines 45-65+). Treating, enhancing and preventing as recited in the above claims are obvious because the end result is to relieve the patient thereof of the symptoms.

www.dhea.com/jointrec.htm discloses as in current claims 1-2, 10-11 and 15-16, a composition for the treatment of arthritis, dl-methionine and manganese. Treating, enhancing and preventing as recited in the above claims are anticipated because the end result is to relieve the patient thereof of the symptoms. In an animal is anticipated,

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as animals are the only ones capable of suffering from joint pains/arthritis. Oral administration is anticipated as the composition is in a form of a tablet.

Myers teaches current claims 4 and 13 the arthritis treating combination is 3.7% weight. It is recited however in the claim that a minimum of 1.2 weight percent, thus 3.7 is more than 1.2 therefore meets the bounds of the claimed invention.

The instant claims differ over the cited references in that the minimum concentration of manganese was not recited, however, since for example the Henderson reference recites manganese to be in the range of 10-500 mg when compared to 250-40,000 mg it is assumed that since ppm is parts per million the concentration falls within the claimed subject matter.

One of ordinary skill in the art would have been motivated to combine the above teaching and employ in the treatment of decreasing cartilage abnormalities in animals. All of the critical elements in the instant claims are taught by combining the above cited references and would have been successful in doing so.

The claimed subject matter is not patentably distinct over the above cited prior art of record.

II. Claim 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Florio US 5,840,715 taken with Henderson et al US 6,255,295 and www.dhea.com/jointrec.htm in view of Myers US 6,911,215 B2 as applied to claims 1-5 and 10-17.

Florio discloses S-adenosyl-methionine (a sulfur-containing amino acid) (see col. 3 lines and manganese (see abstract) to treat osteoarthritis and provides relief from

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arthritis as in claims 6 and 7 and 8. Treating, enhancing and preventing as recited in the above claims are obvious because the end result is to relieve the patient thereof of the symptoms. In an animal is obvious as animals are the only ones capable of suffering from joint pains/arthritis

Henderson et al teach current claims 6-8 administering a composition for reducing inflammation of connective tissue (cartilage) in mammals by administering orally (see col. 20 lines 50+) S-adenosylmethionine an amino sugar that contains manganese (see col. 10 lines 45-65+). Treating, enhancing and preventing as recited in the above claims are obvious because the end result is to relieve the patient thereof of the symptoms.

www.dhea.com/jointrec.htm discloses as in current claims 6-8 a composition for the treatment of arthritis, dl-methionine and manganese. Treating, enhancing and preventing as recited in the above claims are anticipated because the end result is to relieve the patient thereof of the symptoms. In an animal is anticipated, as animals are the only ones capable of suffering from joint pains/arthritis. Oral administration is anticipated as the composition is in a form of a tablet.

Myers teaches current claim 9 the arthritis treating combination is 3.7% weight. It is recited however in the claim that a minimum of 1.2 weight percent, thus 3.7 is more than 1-2 weight percent therefore meets the bounds of the claimed invention.

The instant claims differ over the cited references in that the minimum concentration of manganese was not recited, however, since for example the Henderson reference recites manganese to be in the range of 10-500 mg when

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compared to 250-40,000 mg it is assumed that since ppm is parts per million the concentration falls within the claimed subject matter.

One of ordinary skill in the art would have been motivated to combine the above teaching and employ in the treatment of decreasing cartilage abnormalities in animals. All of the critical elements in the instant claims are taught by combining the above cited references and would have been successful in doing so.

The claimed subject matter is not patentably distinct over the aabove cited prior art of record.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 1-17 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 - 20 of U.S. Patent Application No. 11199350. Although the conflicting claims are not identical, they are not patentably distinct from each other. The reasons are as follows:

Both sets of claims refer to treating or enhancing cartilage abnormalities – decreasing cartilage abnormalities in the current application (claims 1 - 17) and improving cartilage abnormalities (claims 1-20) in the copending application. The current application claims anticipate the copending application claims

Both applications recite using the same compositions and/or derivatives thereof. See current application claims 1 - 17 and copending application claims 1-20. The compositions recited in the claims are anticipatory of each other.

In view of the foregoing, the copending application claims and the current application claims are obvious variations.

Claim 1-17 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 - 33 of U.S. Patent Application No. 10774951. Although the conflicting claims are not identical, they are not patentably distinct from each other. The reasons are as follows:

Both sets of claims refer to treating, improving, decreasing or preventing cartilage abnormalities – improving cartilage abnormalities in the current application (claims 1 - 17) administering a sulfur containing amino acid, manganese and decreasing cartilage abnormalities (claims 1-17) in the copending application through administration of proline or glycine. The current application claims anticipate the copending application claims

The compositions recited in the claims are anticipatory of each other.


In view of the foregoing, the copending application claims and the current application claims are obvious variations.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shirley V. Gembah whose telephone number is 571-272-8504. The examiner can normally be reached on 8:30 -5:00, Monday- Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Low can be reached on 571-272-0951. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SVG
4/18/06


CHRISTOPHER S. F. LOW
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600

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